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1009

#2.

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RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/954,950

DATE: 10/05/2001  
 TIME: 15:24:02

Input Set : A:\35718-238971 Seq Listing.txt  
 Output Set: N:\CRF3\10052001\I954950.raw

4 <110> APPLICANT: Mahajan, Pramod B.  
 6 <120> TITLE OF INVENTION: Rice MLH1 Ortholog and Uses Thereof  
 9 <130> FILE REFERENCE: 35718/238971  
 C--> 11 <140> CURRENT APPLICATION NUMBER: US/09/954,950  
 C--> 11 <141> CURRENT FILING DATE: 2001-09-18  
 11 <150> PRIOR APPLICATION NUMBER: 60/233,124  
 12 <151> PRIOR FILING DATE: 2000-09-18  
 14 <160> NUMBER OF SEQ ID NOS: 4  
 16 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
 18 <210> SEQ ID NO: 1  
 19 <211> LENGTH: 2501  
 20 <212> TYPE: DNA  
 21 <213> ORGANISM: Oryza sativa  
 23 <220> FEATURE:  
 24 <221> NAME/KEY: CDS  
 25 <222> LOCATION: (121)...(2295)  
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 29 tcgctgccct cgccctcaccg cggcccaacc gcccgtacga gagatcgagc agggcggggc 120  
 30 atg gac gag cct tcg ccg cgc gga ggt ggg tgc gcc ggg gag ccg ccc 168  
 31 Met Asp Glu Pro Ser Pro Arg Gly Gly Cys Ala Gly Glu Pro Pro  
 32 1 5 10 15  
 34 cgc atc cgg agg ttg gag gag tcg gtg gtg aac cgc atc gcg gcg ggg 216  
 35 Arg Ile Arg Arg Leu Glu Glu Ser Val Val Asn Arg Ile Ala Ala Gly  
 36 20 25 30  
 38 gag gtg atc cag cgg ccg tcg tcg gcg gtg aag gag ctc atc gag aac 264  
 39 Glu Val Ile Gln Arg Pro Ser Ser Ala Val Lys Glu Leu Ile Glu Asn  
 40 35 40 45  
 42 agc ctc gac gct ggc gcc tcc agc gtc tcc gtt gcg gtg aag gac ggt 312  
 43 Ser Leu Asp Ala Gly Ala Ser Ser Val Ser Val Ala Val Lys Asp Gly  
 44 50 55 60  
 46 ggc ctc aag ctc atc cag gtc tcc gat gac ggc cat ggc atc agg ttt 360  
 47 Gly Leu Lys Leu Ile Gln Val Ser Asp Asp Gly His Gly Ile Arg Phe  
 48 65 70 75 80  
 50 gag gat ttg gca ata ttg tcg gaa agg cat act acc tca aag tta tct 408  
 51 Glu Asp Leu Ala Ile Leu Cys Glu Arg His Thr Thr Ser Lys Leu Ser  
 52 85 90 95  
 54 gca tac gag gat ctg cag acc ata aaa tcg atg ggg ttc aga ggg gag 456  
 55 Ala Tyr Glu Asp Leu Gln Thr Ile Lys Ser Met Gly Phe Arg Gly Glu  
 56 100 105 110  
 58 gct ttg gct agt atg act tat gtt ggc cat gtt acc gtg aca acg ata 504  
 59 Ala Leu Ala Ser Met Thr Tyr Val Gly His Val Thr Val Thr Thr Ile  
 60 115 120 125  
 62 aca gaa ggc caa ttg cac ggc tac agg gtt tct tac aga gat ggt gta 552  
 63 Thr Glu Gly Gln Leu His Gly Tyr Arg Val Ser Tyr Arg Asp Gly Val  
 64 130 135 140  
 66 atg gag aat gag cct aag tcg gct gcg gtg aaa gga act caa gtc 600

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 67  | Met | Glu | Asn | Glu | Pro | Lys | Pro | Cys | Ala | Ala | Val | Lys | Gly | Thr | Gln | Val |
| 68  | 145 |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     |     | 160 |
| 70  | atg | gtt | gaa | aat | cta | ttt | tac | aac | atg | gtt | gcc | cgc | aag | aaa | aca | ttg |
| 71  | Met | Val | Glu | Asn | Leu | Phe | Tyr | Asn | Met | Val | Ala | Arg | Lys | Lys | Thr | Leu |
| 72  |     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| 74  | cag | aac | tcc | aat | gat | gac | tac | ccc | aag | atc | gtt | gac | ttc | atc | agt | cgg |
| 75  | Gln | Asn | Ser | Asn | Asp | Asp | Tyr | Pro | Lys | Ile | Val | Asp | Phe | Ile | Ser | Arg |
| 76  |     |     |     |     | 180 |     |     |     | 185 |     |     |     | 190 |     |     |     |
| 78  | ttt | gca | gtc | cat | cac | atc | aac | gtt | acc | ttc | tct | tgc | aga | aag | cat | gga |
| 79  | Phe | Ala | Val | His | His | Ile | Asn | Val | Thr | Phe | Ser | Cys | Arg | Lys | His | Gly |
| 80  |     |     |     |     | 195 |     |     | 200 |     |     | 205 |     |     |     |     |     |
| 82  | gcc | aat | aga | gca | gat | gtt | cat | agt | gca | agt | aca | tcc | tca | agg | tta | gat |
| 83  | Ala | Asn | Arg | Ala | Asp | Val | His | Ser | Ala | Ser | Thr | Ser | Ser | Arg | Leu | Asp |
| 84  |     |     |     |     | 210 |     |     | 215 |     |     | 220 |     |     |     |     |     |
| 86  | gct | atc | agg | agt | gtc | tat | ggg | gct | tct | gtc | gtt | cgt | gat | ctc | ata | gaa |
| 87  | Ala | Ile | Arg | Ser | Val | Tyr | Gly | Ala | Ser | Val | Val | Arg | Asp | Leu | Ile | Glu |
| 88  |     |     |     |     | 225 |     |     | 230 |     |     | 235 |     |     |     | 240 |     |
| 90  | ata | aag | gtt | tca | tat | gag | gat | gct | gca | gat | tca | atc | ttc | aag | atg | gat |
| 91  | Ile | Lys | Val | Ser | Tyr | Glu | Asp | Ala | Ala | Asp | Ser | Ile | Phe | Lys | Met | Asp |
| 92  |     |     |     |     | 245 |     |     | 250 |     |     | 255 |     |     |     |     |     |
| 94  | ggt | tac | atc | tca | aat | gca | aat | tat | gtg | gca | aag | aag | att | aca | atg | att |
| 95  | Gly | Tyr | Ile | Ser | Asn | Ala | Asn | Tyr | Val | Ala | Lys | Lys | Ile | Thr | Met | Ile |
| 96  |     |     |     |     | 260 |     |     | 265 |     |     | 270 |     |     |     |     |     |
| 98  | ctt | ttc | ata | aat | gat | agg | ctt | gtt | gac | tgt | act | gct | ttg | aaa | aga | gct |
| 99  | Leu | Phe | Ile | Asn | Asp | Arg | Leu | Val | Asp | Cys | Thr | Ala | Leu | Lys | Arg | Ala |
| 100 |     |     |     |     | 275 |     |     | 280 |     |     | 285 |     |     |     |     |     |
| 102 | att | gaa | ttt | gtg | tac | tct | gca | aca | ttg | cct | caa | gca | tcc | aaa | cct | ttc |
| 103 | Ile | Glu | Phe | Val | Tyr | Ser | Ala | Thr | Leu | Pro | Gln | Ala | Ser | Lys | Pro | Phe |
| 104 |     |     |     |     | 290 |     |     | 295 |     |     | 300 |     |     |     |     |     |
| 106 | ata | tac | atg | tcc | ata | cat | ctt | cca | tca | gaa | cac | gtg | gat | gtt | aat | ata |
| 107 | Ile | Tyr | Met | Ser | Ile | His | Leu | Pro | Ser | Glu | His | Val | Asp | Val | Asn | Ile |
| 108 |     |     |     |     | 305 |     |     | 310 |     |     | 315 |     |     |     | 320 |     |
| 110 | cac | cca | acc | aag | aaa | gag | gtt | agc | ctt | ttg | aat | caa | gag | cgt | att | att |
| 111 | His | Pro | Thr | Lys | Lys | Glu | Val | Ser | Leu | Leu | Asn | Gln | Glu | Arg | Ile | Ile |
| 112 |     |     |     |     | 325 |     |     | 330 |     |     | 335 |     |     |     |     |     |
| 115 | gaa | aca | ata | aga | aat | gct | att | gag | gaa | aaa | ctg | atg | aat | tct | aat | aca |
| 116 | Glu | Thr | Ile | Arg | Asn | Ala | Ile | Glu | Glu | Lys | Leu | Met | Asn | Ser | Asn | Thr |
| 117 |     |     |     |     | 340 |     |     | 345 |     |     | 350 |     |     |     |     |     |
| 119 | acc | agg | ata | ttc | caa | act | cag | gca | tta | aac | tca | ttt | ggg | att | gct | caa |
| 120 | Thr | Arg | Ile | Phe | Gln | Thr | Gln | Ala | Leu | Asn | Leu | Ser | Gly | Ile | Ala | Gln |
| 121 |     |     |     |     | 355 |     |     | 360 |     |     | 365 |     |     |     |     |     |
| 123 | gct | aac | cca | caa | aag | aat | tat | gtt | tct | gag | gcc | agt | atg | ggt | tct | gga |
| 124 | Ala | Asn | Pro | Gln | Lys | Asp | Lys | Val | Ser | Glu | Ala | Ser | Met | Gly | Ser | Gly |
| 125 |     |     |     |     | 370 |     |     | 375 |     |     | 380 |     |     |     |     |     |
| 127 | aca | aaa | tct | caa | aaa | att | cct | gtg | agc | caa | atg | gtc | aga | aca | gat | cca |
| 128 | Thr | Lys | Ser | Gln | Lys | Ile | Pro | Val | Ser | Gln | Met | Val | Arg | Thr | Asp | Pro |
| 129 |     |     |     |     | 385 |     |     | 390 |     |     | 395 |     |     |     | 400 |     |
| 131 | cgc | aat | cca | tct | gga | aga | ttt | cac | acc | tac | tgg | cac | ggg | caa | tct | tca |
| 132 | Arg | Asn | Pro | Ser | Gly | Arg | Leu | His | Thr | Tyr | Trp | His | Gly | Gln | Ser | Ser |

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|---|-----|-----|-----|------|
| 133   | 405 | 410 | 415 |      |
| 135 aat ctt gaa aag aaa ttt gat ctt gta tct gta aga aat gtt gta aga |     |     |     | 1416 |
| 136 Asn Leu Glu Lys Lys Phe Asp Leu Val Ser Val Arg Asn Val Val Arg |     |     |     |      |
| 137   | 420 | 425 | 430 |      |
| 139 tca agg aga aac caa aaa gat gct ggt gat ttg tca agc cgt cat gag |     |     |     | 1464 |
| 140 Ser Arg Arg Asn Gln Lys Asp Ala Gly Asp Leu Ser Ser Arg His Glu |     |     |     |      |
| 141   | 435 | 440 | 445 |      |
| 143 ctc ctt gtg gaa ata gat tct agc ttc cat cct ggc ctt ttg gac att |     |     |     | 1512 |
| 144 Leu Leu Val Glu Ile Asp Ser Ser Phe His Pro Gly Leu Leu Asp Ile |     |     |     |      |
| 145   | 450 | 455 | 460 |      |
| 147 gtc aag aac tgc aca tat gtt gga ctt gcc gat gaa gcc ttt gct ttg |     |     |     | 1560 |
| 148 Val Lys Asn Cys Thr Tyr Val Gly Leu Ala Asp Glu Ala Phe Ala Leu |     |     |     |      |
| 149   | 465 | 470 | 475 | 480  |
| 151 ata caa cac aat acc cgc tta tac ctt gta aat gtg gta aat att agt |     |     |     | 1608 |
| 152 Ile Gln His Asn Thr Arg Leu Tyr Leu Val Asn Val Val Asn Ile Ser |     |     |     |      |
| 153   | 485 | 490 | 495 |      |
| 155 aaa gaa ctt atg tac cag caa gct ttg tgc cgt ttt ggg aac ttc aat |     |     |     | 1656 |
| 156 Lys Glu Leu Met Tyr Gln Gln Ala Leu Cys Arg Phe Gly Asn Phe Asn |     |     |     |      |
| 157   | 500 | 505 | 510 |      |
| 159 gct att cag ctc agt gaa cca gct cca ctt cag gag ttg ctg gtg atg |     |     |     | 1704 |
| 160 Ala Ile Gln Leu Ser/Glu Pro Ala Pro Leu Gln Glu Leu Leu Val Met |     |     |     |      |
| 161   | 515 | 520 | 525 |      |
| 163 gca ctg aaa gac gat gaa ttg atg agt gat gaa aag gat gat gag aaa |     |     |     | 1752 |
| 164 Ala Leu Lys Asp Asp Glu Leu Met Ser Asp Glu Lys Asp Asp Glu Lys |     |     |     |      |
| 165   | 530 | 535 | 540 |      |
| 167 ctg gag att gca gaa gta aac act gag ata cta aaa gaa aat gct gag |     |     |     | 1800 |
| 168 Leu Glu Ile Ala Glu Val Asn Thr Glu Ile Leu Lys Glu Asn Ala Glu |     |     |     |      |
| 169   | 545 | 550 | 555 | 560  |
| 172 atg att aat gag tac ttt tct att cac att gat caa gat ggc aaa ttg |     |     |     | 1848 |
| 173 Met Ile Asn Glu Tyr Phe Ser Ile His Ile Asp Gln Asp Gly Lys Leu |     |     |     |      |
| 174   | 565 | 570 | 575 |      |
| 176 aca aga ott cct gtt gta ctg gac cag tac acc cct gat atg gac cgt |     |     |     | 1896 |
| 177 Thr Arg Leu Pro Val Val Leu Asp Gln Tyr Thr Pro Asp Met Asp Arg |     |     |     |      |
| 178   | 580 | 585 | 590 |      |
| 180 ctt cca gaa ttt gtg ttg gct tta gga aat gat gtt act tgg gat gac |     |     |     | 1944 |
| 181 Leu Pro Glu Phe Val Leu Ala Leu Gly Asn Asp Val Thr Trp Asp Asp |     |     |     |      |
| 182   | 595 | 600 | 605 |      |
| 184 gag aaa gag tgc ttc aga aca gta gct tct gct gta gga aac ttc tat |     |     |     | 1992 |
| 185 Glu Lys Glu Cys Phe Arg Thr Val Ala Ser Ala Val Gly Asn Phe Tyr |     |     |     |      |
| 186   | 610 | 615 | 620 |      |
| 188 gca ctt cat ccc cca atc ctt cca aat cca tct ggg aat ggc att cat |     |     |     | 2040 |
| 189 Ala Leu His Pro Pro Ile Leu Pro Asn Pro Ser Gly Asn Gly Ile His |     |     |     |      |
| 190   | 625 | 630 | 635 | 640  |
| 192 tta tac aag aaa aat aga gat tca atg gct gat gaa cat gct gag aat |     |     |     | 2088 |
| 193 Leu Tyr Lys Lys Asn Arg Asp Ser Met Ala Asp Glu His Ala Glu Asn |     |     |     |      |
| 194   | 645 | 650 | 655 |      |
| 196 gat cta ata tca gat gaa aat gac gtt gat caa gaa ctt ctt gcg gaa |     |     |     | 2136 |
| 197 Asp Leu Ile Ser Asp Glu Asn Asp Val Asp Gln Glu Leu Leu Ala Glu |     |     |     |      |
| 198   | 660 | 665 | 670 |      |

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| 200 | gca         | gaa        | gca          | gca        | tgg        | gcc        | caa         | cgt        | gag        | tgg | acc | att | cag | cat | gtc | ttg | 2184 |
| 201 | Ala         | Glu        | Ala          | Ala        | Trp        | Ala        | Gln         | Arg        | Glu        | Trp | Thr | Ile | Gln | His | Val | Leu |      |
| 202 | 675         |            |              |            |            |            | 680         |            |            |     |     |     | 685 |     |     |     |      |
| 204 | ttt         | cca        | tcc          | atg        | cga        | ctt        | ttc         | ctc        | aag        | ccc | ccg | aag | tca | atg | gca | aca | 2232 |
| 205 | Phe         | Pro        | Ser          | Met        | Arg        | Leu        | Phe         | Leu        | Lys        | Pro | Pro | Lys | Ser | Met | Ala | Thr |      |
| 206 | 690         |            |              |            |            |            | 695         |            |            |     |     | 700 |     |     |     |     |      |
| 208 | gat         | gga        | acg          | ttt        | gtg        | cag        | ttt         | gtt        | gct        | tcc | ttg | gag | aaa | ctc | tac | aag | 2280 |
| 209 | Asp         | Gly        | Thr          | Phe        | Val        | Gln        | Val         | Ala        | Ser        | Leu | Glu | Lys | Leu | Tyr | Lys | Ile |      |
| 210 | 705         |            |              |            |            |            | 710         |            |            |     | 715 |     | 720 |     |     |     |      |
| 212 | ttt         | gaa        | agg          | tgt        | tag        | ctcataagtg | agaaaaatgaa | ggcagagtaa | gatcatgatt |     |     |     |     |     |     |     | 2335 |
| 213 | Phe         | Glu        | Arg          | Cys        | *          |            |             |            |            |     |     |     |     |     |     |     |      |
| 216 | catggagtgt  | ttttgaaaat | gtgtataatt   | tcaccgtatt | atgtactttg | atagtgtctg |             |            |            |     |     |     |     |     |     |     | 2395 |
| 217 | tagaaaactga | agaaaagaag | atggctttac   | ttctgaattt | aaagttaacg | atgccagcaa |             |            |            |     |     |     |     |     |     |     | 2455 |
| 218 | ttgttatattc | tgatcaacca | aaaaaaaaaa   | aaaaaaaaaa | aaaaaaaaaa | aaaaaaaaaa |             |            |            |     |     |     |     |     |     |     | 2501 |
| 220 | <210>       | SEQ ID NO: | 2            |            |            |            |             |            |            |     |     |     |     |     |     |     |      |
| 221 | <211>       | LENGTH:    | 724          |            |            |            |             |            |            |     |     |     |     |     |     |     |      |
| 222 | <212>       | TYPE:      | PRT          |            |            |            |             |            |            |     |     |     |     |     |     |     |      |
| 223 | <213>       | ORGANISM:  | Oryza sativa |            |            |            |             |            |            |     |     |     |     |     |     |     |      |
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| 226 | Met         | Asp        | Glu          | Pro        | Ser        | Pro        | Arg         | Gly        | Gly        | Cys | Ala | Gly | Glu | Pro | Pro |     |      |
| 227 | 1           |            |              |            |            |            | 5           |            |            |     | 10  |     |     | 15  |     |     |      |
| 228 | Arg         | Ile        | Arg          | Arg        | Leu        | Glu        | Glu         | Ser        | Val        | Val | Asn | Arg | Ile | Ala | Ala | Gly |      |
| 229 |             |            |              |            |            |            | 20          |            |            |     | 25  |     |     | 30  |     |     |      |
| 230 | Glu         | Val        | Ile          | Gln        | Arg        | Pro        | Ser         | Ser        | Ala        | Val | Lys | Glu | Leu | Ile | Glu | Asn |      |
| 231 |             |            |              |            |            |            | 35          |            |            |     | 40  |     |     | 45  |     |     |      |
| 232 | Ser         | Leu        | Asp          | Ala        | Gly        | Ala        | Ser         | Ser        | Val        | Val | Ser | Ala | Val | Lys | Asp | Gly |      |
| 233 |             |            |              |            |            |            | 50          |            |            |     | 55  |     |     | 60  |     |     |      |
| 234 | Gly         | Leu        | Lys          | Leu        | Ile        | Gln        | Val         | Ser        | Asp        | Asp | Gly | His | Gly | Ile | Arg | Phe |      |
| 235 |             |            |              |            |            |            | 65          |            |            |     | 70  |     |     | 75  |     |     | 80   |
| 236 | Glu         | Asp        | Leu          | Ala        | Ile        | Leu        | Cys         | Glu        | Arg        | His | Thr | Thr | Ser | Lys | Leu | Ser |      |
| 237 |             |            |              |            |            |            | 85          |            |            |     | 90  |     |     | 95  |     |     |      |
| 238 | Ala         | Tyr        | Glu          | Asp        | Leu        | Gln        | Thr         | Ile        | Lys        | Ser | Met | Gly | Phe | Arg | Gly | Glu |      |
| 239 |             |            |              |            |            |            | 100         |            |            |     | 105 |     |     | 110 |     |     |      |
| 240 | Ala         | Leu        | Ala          | Ser        | Met        | Thr        | Tyr         | Val        | Gly        | His | Val | Thr | Val | Thr | Thr | Ile |      |
| 241 |             |            |              |            |            |            | 115         |            |            |     | 120 |     |     | 125 |     |     |      |
| 242 | Thr         | Glu        | Gly          | Gln        | Leu        | His        | Gly         | Tyr        | Arg        | Val | Ser | Tyr | Arg | Asp | Gly | Val |      |
| 243 |             |            |              |            |            |            | 130         |            |            |     | 135 |     |     | 140 |     |     |      |
| 244 | Met         | Glu        | Asn          | Glu        | Pro        | Lys        | Pro         | Cys        | Ala        | Ala | Val | Lys | Gly | Thr | Gln | Val |      |
| 245 |             |            |              |            |            |            | 145         |            |            |     | 150 |     |     | 155 |     |     | 160  |
| 246 | Met         | Val        | Glu          | Asn        | Leu        | Phe        | Tyr         | Asn        | Met        | Val | Ala | Arg | Lys | Lys | Thr | Leu |      |
| 247 |             |            |              |            |            |            | 165         |            |            |     | 170 |     |     | 175 |     |     |      |
| 248 | Gln         | Asn        | Ser          | Asn        | Asp        | Asp        | Tyr         | Pro        | Lys        | Ile | Val | Asp | Phe | Ile | Ser | Arg |      |
| 249 |             |            |              |            |            |            | 180         |            |            |     | 185 |     |     | 190 |     |     |      |
| 250 | Phe         | Ala        | Val          | His        | His        | Ile        | Asn         | Val        | Thr        | Phe | Ser | Cys | Arg | Lys | His | Gly |      |
| 251 |             |            |              |            |            |            | 195         |            |            |     | 200 |     |     | 205 |     |     |      |
| 252 | Ala         | Asn        | Arg          | Ala        | Asp        | Val        | His         | Ser        | Ala        | Ser | Thr | Ser | Ser | Arg | Leu | Asp |      |
| 253 |             |            |              |            |            |            | 210         |            |            |     | 215 |     |     | 220 |     |     |      |
| 254 | Ala         | Ile        | Arg          | Ser        | Val        | Tyr        | Gly         | Ala        | Ser        | Val | Val | Arg | Asp | Leu | Ile | Glu |      |
| 255 |             |            |              |            |            |            | 225         |            |            |     | 230 |     |     | 235 |     |     | 240  |

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256 Ile Lys Val Ser Tyr Glu Asp Ala Ala Asp Ser Ile Phe Lys Met Asp  
257 245 250 255  
258 Gly Tyr Ile Ser Asn Ala Asn Tyr Val Ala Lys Lys Ile Thr Met Ile  
259 260 265 270  
260 Leu Phe Ile Asn Asp Arg Leu Val Asp Cys Thr Ala Leu Lys Arg Ala  
261 275 280 285  
262 Ile Glu Phe Val Tyr Ser Ala Thr Leu Pro Gln Ala Ser Lys Pro Phe  
263 290 295 300  
264 Ile Tyr Met Ser Ile His Leu Pro Ser Glu His Val Asp Val Asn Ile  
265 305 310 315 320  
266 His Pro Thr Lys Lys Glu Val Ser Leu Leu Asn Gln Glu Arg Ile Ile  
267 325 330 335  
268 Glu Thr Ile Arg Asn Ala Ile Glu Glu Lys Leu Met Asn Ser Asn Thr  
269 340 345 350  
270 Thr Arg Ile Phe Gln Thr Gln Ala Leu Asn Leu Ser Gly Ile Ala Gln  
271 355 360 365  
272 Ala Asn Pro Gln Lys Asp Lys Val Ser Glu Ala Ser Met Gly Ser Gly  
273 370 375 380  
274 Thr Lys Ser Gln Lys Ile Pro Val Ser Gln Met Val Arg Thr Asp Pro  
275 385 390 395 400  
276 Arg Asn Pro Ser Gly Arg Leu His Thr Tyr Trp His Gly Gln Ser Ser  
277 405 410 415  
278 Asn Leu Glu Lys Lys Phe Asp Leu Val Ser Val Arg Asn Val Val Arg  
279 420 425 430  
280 Ser Arg Arg Asn Gln Lys Asp Ala Gly Asp Leu Ser Ser Arg His Glu  
281 435 440 445  
282 Leu Leu Val Glu Ile Asp Ser Ser Phe His Pro Gly Leu Leu Asp Ile  
283 450 455 460  
284 Val Lys Asn Cys Thr Tyr Val Gly Leu Ala Asp Glu Ala Phe Ala Leu  
285 465 470 475 480  
286 Ile Gln His Asn Thr Arg Leu Tyr Leu Val Asn Val Val Asn Ile Ser  
287 485 490 495  
288 Lys Glu Leu Met Tyr Gln Gln Ala Leu Cys Arg Phe Gly Asn Phe Asn  
289 500 505 510  
290 Ala Ile Gln Leu Ser Glu Pro Ala Pro Leu Gln Glu Leu Leu Val Met  
291 515 520 525  
292 Ala Leu Lys Asp Asp Glu Leu Met Ser Asp Glu Lys Asp Asp Glu Lys  
293 530 535 540  
294 Leu Glu Ile Ala Glu Val Asn Thr Glu Ile Leu Lys Glu Asn Ala Glu  
295 545 550 555 560  
296 Met Ile Asn Glu Tyr Phe Ser Ile His Ile Asp Gln Asp Gly Lys Leu  
297 565 570 575  
298 Thr Arg Leu Pro Val Val Leu Asp Gln Tyr Thr Pro Asp Met Asp Arg  
299 580 585 590  
300 Leu Pro Glu Phe Val Leu Ala Leu Gly Asn Asp Val Thr Trp Asp Asp  
301 595 600 605  
302 Glu Lys Glu Cys Phe Arg Thr Val Ala Ser Ala Val Gly Asn Phe Tyr  
303 610 615 620  
304 Ala Leu His Pro Pro Ile Leu Pro Asn Pro Ser Gly Asn Gly Ile His

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/954,950

DATE: 10/05/2001

TIME: 15:24:03

Input Set : A:\35718-238971 Seq.Listing.txt  
Output Set: N:\CRF3\10052001\I954950.raw

L:11 M:270 C: Current Application Number differs, Replaced Current Application No

L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date